

Title (en)  
NOISE REDUCTION DEVICE

Title (de)  
RAUSCHVERRINGERUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE RÉDUCTION DE BRUIT

Publication  
**EP 3738494 A1 20201118 (EN)**

Application  
**EP 19174530 A 20190514**

Priority  
EP 19174530 A 20190514

Abstract (en)  
In a noise reduction device, comprising a main tube (MT) having a first pass-through area (A1) where a fluid enters the main tube, and a side-branch (SB) connected to the main tube (MT), the main tube (MT) comprises a narrowed section (NS) having a second pass-through area (A2) that is at least 25% (preferably, at least 50%, and more preferably, at least 60%, such as 75%) smaller than the first pass-through area (A1), and the side-branch (SB) is connected to the narrowed section (NS) of the main tube (MT). Where the side-branch (SB) is connected to the main tube (MT), the side-branch (SB) is preferably sealed-off by a cover that is acoustically transparent, which may be impermeable for the fluid. Such a noise reduction device is advantageously used in a fluid displacing appliance (e.g. a vacuum cleaner), comprising a motor for displacing a fluid (e.g. gas or liquid).

IPC 8 full level  
**A47L 9/00** (2006.01)

CPC (source: CN EP KR US)  
**A47L 9/0081** (2013.01 - CN EP KR); **G10K 11/161** (2013.01 - US); **G10K 11/172** (2013.01 - KR); **A47L 9/0081** (2013.01 - US); **G10K 2210/105** (2013.01 - KR)

Citation (applicant)  
• US 6450289 B1 20020917 - FIELD CHRISTOPHER DAVID [AU], et al  
• S. K. TANG, J. ACOUST. SOC. AM., vol. 132, no. 5, November 2012 (2012-11-01)

Citation (search report)  
• [A] US 4418443 A 19831206 - FISCHER ERNEST J [US]  
• [A] EP 1407659 A1 20040414 - WERNER JUERGEN [DE], et al  
• [A] KR 20010113287 A 20011228 - SAMSUNG KWANGJU ELECTRONICS CO [KR]  
• [A] EP 1381025 A2 20040114 - EBERSPAECHER J GMBH & CO [DE]

Designated contracting state (EPC)  
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Designated extension state (EPC)  
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DOCDB simple family (publication)  
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**EP 19174530 A 20190514**; BR 112021022586 A 20200506; CN 202080035501 A 20200506; EP 2020062481 W 20200506; EP 20723130 A 20200506; JP 2021567787 A 20200506; KR 20217040582 A 20200506; PL 20723130 T 20200506; UA A202107044 A 20200506; US 202017611151 A 20200506